

way is left than to place them in the same race." I find, on the contrary, that the birds of the two localities are as separable from each other as are the other recognized (and valid) races of the species. The Huitzilac, Morelos, birds, being topotypical *griseipectus*, retain that name, while for the San Sebastián, Jalisco, specimens I propose the name—

**Dendrorhtyx macroura diversus**, n. subsp.

*Type*.—U. S. N. M. (Biol. Surv. Coll.) 155936, ♂, San Sebastián, Jalisco, Mexico, collected March 28, 1897, by E. W. Nelson and E. A. Goldman.

*Subspecific characters*.—Similar to *D. m. griseipectus* Nelson but differing in having the

lower back, rump, and upper tail coverts more olive-brown and with no or little black barring; in having the flanks and thighs more olive-brown, less barred; and in having the under tail coverts more brownish, less blackish, with less contrast between the dark areas and the whitish tips.

*Range*.—Known only from northwestern Jalisco (Mascota and San Sebastián).

*Measurements*.—4 ♂, including the type—wing 153–161 (156); tail 138–149 (144.5); culmen from the base 20.6–20.8 (20.65); tarsus 50–53 (51.1); middle toe without claw 39.7–40.7 (40.2 mm), 3 ♀—wing 141–151 (146); tail 119–141 (128.7); culmen from base 19.5–20.8 (20.3); tarsus 47–47.5 (47.2); middle toe without claw 38–38.9 (38.3 mm).

ICHTHYOLOGY.—*Two new characinid fishes from South America of the genus Gilbertolus Eigenmann.*<sup>1</sup> LEONARD P. SCHULTZ, U. S. National Museum.

In recent studies of some characinid fishes that I collected in the Maracaibo Basin of Venezuela, it was observed that the forms of *Gilbertolus* inhabiting the Río Atrato and the Río Magdalena of Colombia and the Maracaibo Basin differed from each other so much that it was decided to describe two of them as new subspecies. The form from the Magdalena River was described by Steindachner in 1878.

The members of this genus seem to occur most frequently in the quiet waters of swampy areas and less frequently in the quieter pools of the rivers. They are nowhere abundant, however, and few specimens are preserved in museums.

Genus *Gilbertolus* Eigenmann

*Gilbertella* Eigenmann, Smithsonian Misc. Coll. 45: 147. 1903 (Genotype: *Anacyrtus (Raestes) alatus* Steindachner.)

*Gilbertolus* Eigenmann, in Eigenmann and Ogle, Proc. U. S. Nat. Mus. 33: 3. 1907. (New name to replace *Gilbertella* Eigenmann, preoccupied.)

KEY TO THE SUBSPECIES OF GILBERTOLUS ALATUS

1a. Pores in lateral line 58 or 59; pectoral rays usually 1,17; black caudal spot barely extending on base of middle rays of caudal fin

<sup>1</sup> Published by permission of the Secretary of the Smithsonian Institution. Received April 22, 1943.

- (see table for counts) (Magdalena Basin) . . . . . *G. a. alatus* (Steindachner)<sup>2</sup>
- 1b. Pores in lateral line to base of caudal fin rays 63 to 68; pectoral rays usually 1,16; black caudal spot extending on base of caudal fin rays as far as on caudal peduncle (Maracaibo Basin) . . . . . *G. a. maracaiboensis*, n. subsp.
- 1c. Pores in lateral line 69 to 74; pectoral rays usually 1,17; black caudal spot not extending on base of caudal fin rays, becoming less distinct in larger specimens (Atrato Basin) . . . . . *G. a. atratoensis*, n. subsp.

**Gilbertolus alatus maracaiboensis**, n. subsp.

*Holotype*.—U.S.N.M. no. 121386, a female specimen, 120 mm in standard length, collected by Leonard P. Schultz, March 11, 1942, in a caño half a mile west of Sinamaica, Estado de Zulia, Venezuela.

*Paratypes* (all collected by author).—U.S. N.M. no. 121387, 4 specimens, 107 to 126.5 mm, taken along with the holotype and bearing the same data; U.S.N.M. no. 121388, 1 example, 61 mm, February 24, 1942, from the Río Socuy, 3 km above its mouth, Maracaibo Basin; U.S.N.M. no. 121389, 1 specimen, 75 mm, March 2, 1942, from the Río Negro below mouth of Río Yasa, Maracaibo Basin.

*Description*.—This description is based on the holotype and six paratypes. Detailed meas-

<sup>2</sup> *Anacyrtus (Raestes) alatus* Steindachner, Denkschr. Akad. Wiss. Wien 39: 65. 1878 (Río Magdalena).

urements were made on the holotype and a paratype, and these data, expressed in hundredths of the standard length, are recorded below, respectively.

Standard length, in mm, 120 and 107. Length of head 24.3 and 25.0; greatest depth of body 37.5 and 35.5; length of snout 5.42 and 6.08; diameter of orbit 7.66 and 7.94; least width of fleshy interorbital 6.50 and 6.52; postorbital length of head (to most posterior tip of operculum) 11.9 and 12.1; tip of snout to rear edge of maxillary 12.8 and 13.8; distance from base of last anal ray to midbase of caudal fin 10.1 and 9.82; least depth of caudal peduncle 10.1 and 9.82; length of anal fin base 40.6 and 44.0; length of longest anal fin ray 14.6 and 13.6; longest dorsal ray 17.1 and 18.0; longest pectoral (first) 35.4 and 37.6; longest pelvic ray 15.0 and 15.1; length of upper caudal lobe 24.2 and —; and of lower lobe 26.3 and —; tip of snout to dorsal origin 57.9 and 58.2; snout to anal origin 57.5 and 56.6; snout to adipose 87.5 and 86.0; snout to pelvic insertion 44.6 and 44.5; snout to pectoral insertion 26.9 and 28.5; distance between tip of supraoccipital process and dorsal origin 39.7 and 39.3; snout to tip of supraoccipital process 19.0 and 19.6.

The following counts were made, respectively: Dorsal rays ii,9 and ii,9; anal rays iv,40 and iv,45; pectorals i,16–i,16 and i,16–i,16; pelvics i,7–i,7 and i,7–i,6; pores in lateral line to base of caudal fin rays 68 and 65; scales above lateral line to origin of dorsal 14 and 13 and below lateral line to pelvic fin base 13 and 11; scales in a zigzag row around caudal peduncle 21 and 22; scale rows in front of dorsal to tip of supraoccipital process 42 and 41; branched caudal fin rays 17 and 17; gill rakers on first gill arch — and 8 + 1 + 15.

Body compressed, the greatest depth usually through region of anus and contained a little less than 3 times in standard length, head about 4, base of anal fin about  $2\frac{1}{2}$ , both in standard length; eye large, much longer than snout, about 3, interorbital about  $4\frac{1}{2}$ , mouth (snout to rear of maxillary) 2, all in length of head; mouth equal to snout and eye; origin of dorsal an equal distance between midbase of caudal fin rays and front margin of the opercular bone; origin of anal a little in advance of dorsal origin, the latter over the base of the fourth branched anal ray; pelvic insertions a little closer to rear of pectoral bases than to anal

origin; ventral margin sharply keeled from in front of anal fin to between rear bases of pectorals, thence a hard low ridge ending at isthmus; lateral line a little decurved behind head, thence following a straight course to one scale row below midbase of caudal fin; length of caudal peduncle equal to its least depth; palatine bones forming an elevated ridge but edentulous; premaxillaries with a pair of canines at their symphysis, then seven pairs of short sharp-pointed conical teeth laterally; maxillaries with a series of sharp-pointed conical teeth; teeth in both jaws in a single series; dentaries with two pairs of long canines, the outer pair fanglike; two pairs of short conical teeth between the inner pair of canines; dentaries behind outer pair of canines with a series of widely spaced conical teeth; canines on lower jaw fitting into pits in upper jaw; lower lobe of caudal fin longer than upper lobe; caudal fin deeply concave or forked; first rays of all fins longest; the first pectoral rays are exceedingly elongate, reaching past anal origin to a vertical line through dorsal origin; pelvics reaching not quite so far; anal origin a little closer to tip of snout than midcaudal base; pectoral fin lanceolate in shape; dorsal fin rather short, about equal to eye and postorbital length of head; breast is thick and heavy, the width across prepectoral shields about equal to two eye diameters, and it is the widest part of the body; prepectoral shield with a notch; lower angle of preopercular bone with a short flat, spinelike projection posteriorly; the second suborbital does not quite cover two-thirds of the cheek, and the remainder is fleshy; the gill rakers are rather long and slender, numbering 7 or 8 + 1 + 14 or 15.

*Color*.—Silvery on sides, back darker; the black caudal spot extends as much on the basal portion of the caudal fin rays as on caudal peduncle, and is a little larger than pupil; margin of thick lower lip blackish; membranes of fins pigmented, the rays less so; in the two smaller specimens a lateral dark band occurs above lateral line, ending in the black caudal spot; peritoneum silvery.

*Remarks*.—Among other characters this new subspecies differs from the other two forms referred to the genus *Gilbertolus* as indicated in the key. Named *maracaiboensis* in reference to the Maracaibo Basin in which specimens have been collected.

*Gilbertolus alatus atratoensis*, n. subsp.

*Gilbertolus alatus* Eigenmann (not of Steindachner), Mem. Carnegie Mus. 9(1): 164, pl. 26, fig. 1. 1922.

*Holotype*.—U.S.N.M. no. 76976, a specimen 91 mm in standard length, collected by Wilson at Quibdo, Río Atrato, Colombia.

*Paratypes*.—U.S.N.M. no. 120170, 14 specimens, collected along with the holotype and bearing same data.

*Description*.—Detailed measurements were made on the holotype and one of the paratypes. These data, expressed in hundredths of the standard length, are recorded below, respectively.

Standard length, in mm, 91 and 87.4. Length of head 25.9 and 24.7; greatest depth 35.2 and 35.3; length of snout 6.04 and 5.95; diameter of orbit 9.67 and 9.16; least width of fleshy inter-orbital space 6.15 and 6.30, postorbital length of head 12.1 and 11.2; tip of snout to rear of maxillary 13.0 and 13.5; length of caudal peduncle 9.78 and 9.72; least depth of caudal peduncle 9.34 and 9.84; length of base of anal fin 42.4 and 42.6; length of longest ray of anal — and 17.2; longest dorsal ray 18.7 and 18.1; longest pectoral ray 35.3 and 36.4; longest pelvic ray 11.9 and 12.2; length of upper caudal lobe 24.2 and —; lower caudal lobe 28.6 and —; tip of snout to dorsal origin 57.9 and 57.0; snout to anal origin 57.2 and 55.2; snout to adipose origin 87.5 and 87.0; snout to pelvic insertion 47.8 and 45.4; snout to pectoral insertion 29.7 and 28.6; distance from tip of supraoccipital process to dorsal origin 37.4 and 36.7; snout

tip to posterior point of supraoccipital process 20.8 and 20.3.

The following counts were made, respectively: Dorsal rays ii,9 and ii,9; anal rays iv,43 and iv,46; pectoral i,17-i,17 and i,17-i,17; pelvics i,7-i,7 and i,7-i,7; pores in lateral line 72 and 71; scales from dorsal origin to lateral line 13 and 13, and from lateral line to pelvic base 12 and 13; zigzag row of scales around caudal peduncle 21 and 22; number of gill rakers on first gill arch 8 + 1 + 15 and 7 + 1 + 14; number of scale rows from tip of supraoccipital process to dorsal origin — and 41; branched caudal fin rays 17 and 17.

It is unnecessary to describe this subspecies as fully as *maracaiboensis*, as it is very similar in all except the following respects: Dorsal origin equidistant between midcaudal base and rear or orbit; the notch in prepectoral shield is much shallower, so that there is hardly any platelike projection at the lower angle; the spiny platelike projection at lower preopercular angle is shorter, so that there is only an indication of a shallow notch above it; the pectorals reach a little past a vertical through dorsal origin.

*Color*.—Caudal spot does not extend out on basis of middle caudal fin rays; otherwise color is the same as in *maracaiboensis*.

*Remarks*.—This new subspecies may be distinguished from other subspecies referred to the genus *Gilbertolus* by means of the key.

Named *atratoensis* in reference to the river system in which it occurs.

TABLE 1.—COUNTS RECORDED ON THE SUBSPECIES OF GIBERTOLUS ALATUS (STEINDACHNER)

Subspecies	Number of fin rays																									
	Anal									Pectoral				Pelvics		Dorsal										
	iv,40	iv,41	iv,42	iv,43	iv,44	iv,45	iv,46	iv,47	iv,48	iv,49	i,15	i,16	i,17	i,18	i,6	i,7	ii,8	ii,9								
<i>atratoensis</i> ...	—	—	—	2	1	4	2	4	—	1	—	—	18	1	—	10	—	11								
<i>maracaiboensis</i>	1	—	—	—	4	2	—	—	—	—	2	11	1	—	1	8	1	6								
<i>alatus</i> .....	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	1	1	—								
Subspecies	Number of scales																									
	Number of pores in lateral line														Above lateral line			Below lateral line to pelvic base								
	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	12	13	14	15	16	10	11	12	13
<i>atratoensis</i> ...	—	—	—	—	—	—	—	—	—	—	—	1	5	3	3	2	1	—	1	6	3	1	—	1	4	6
<i>maracaiboensis</i>	—	—	—	—	—	2	1	2	—	1	1	—	—	—	—	—	—	2	1	2	—	—	—	3	1	1
<i>alatus</i> .....	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	1	—	—	—